

Division 3. Air Resources Board

Chapter 3.6. Periodic Smoke Inspections of Heavy-Duty Diesel-Powered Vehicles

§ 2193. Smoke Opacity Inspection Intervals, Standards, and Test Procedures.

(a) Initial phase-in. Vehicles which are subject to the requirements of this chapter on the operative date of these regulations shall be tested for smoke opacity (and repaired if the applicable smoke opacity standard is exceeded) in accordance with the requirements of section 2192 pursuant to the applicable following schedule:

(1) Fleets of five or more vehicles subject to this chapter:

(A) At least 25 percent of the fleet's vehicles within 180 calendar days of the effective date of these regulations;

(B) At least 50 percent of the fleet's vehicles within 270 calendar days of the effective date of these regulations;

(C) At least 75 percent of the fleet's vehicles within 365 calendar days of the effective date of these regulations;

and

(D) The fleet's remaining vehicles no later than 455 calendar days after the effective date of these regulations.

(2) For fleets of 2 to 4 vehicles, at least one vehicle must be tested in the initial 180 day period, and in each subsequent 90 calendar day period, until all vehicles in the fleet have been tested.

(b) New fleets. Fleets which first become subject to the requirements of this chapter subsequent to the effective date of these regulations must be tested in accordance with section 2192 within the applicable time intervals reflected in subsection (a) above, beginning on the date the fleet becomes subject to these regulations.

(c) Annual testing. Once a vehicle subject to the requirements of this chapter has been tested in accordance with subsection (a) or (b), or has been acquired by a fleet owner after the effective date of these regulations, the vehicle must periodically be tested for smoke opacity (and repaired if the applicable smoke opacity standard is exceeded) in accordance with the requirements of section 2192 within 12 months of the previous test conducted under this section 2193.

(d) Exemption for vehicles powered by 1994 or subsequent model-year engines. Any heavy-duty vehicle powered by a 1994 or subsequent model-year engine is exempt from the testing requirements of this section until January 1 of the calendar year that is four years after the model year of the engine, and is to be treated as having been acquired by the owner on that January 1. For example, 1995 model-year engine will be exempt until January 1, 1999.

(e) Smoke opacity standards and test procedures.

(1) Except as otherwise provided in subsection (e)(2) below, the smoke opacity standards and test procedures are those specified in section 2182, Titled 13, California Code of Regulations.

(2) Prior to July 1, 1999, if a repair facility is not equipped with an operable SAE J1667 smokemeter, vehicles may be tested at the repair facility in accordance with the smoke opacity test procedures and opacity standards set forth in section (e)(3). These are the test procedures and opacity standards originally established for the heavy-duty diesel vehicle roadside inspection program in 1991.

(3) Optional smoke opacity test procedures and standards prior to July 1, 1999.

(A) Standards.

1. The maximum smoke opacity standard for a 1991 or subsequent model-year heavy-duty diesel-powered vehicle with a Federal peak smoke engine certification level of 35 percent peak opacity or less is 40 percent when tested in accordance with section 2193(e)(3)(B) and (C).

2. The maximum smoke opacity standard for any other heavy-duty diesel-powered vehicle is 55 percent when tested in accordance with section 2193(e)(3)(B) and (C).

3. The above standards do not apply to an engine exempted under section 2182(b).

(B) Equipment. The smoke opacity measurement equipment shall consist of a light extinction type smokemeter which includes an optical detection unit, a control/indicator unit, and a strip chart recorder.

1. The smokemeter shall comply with the specifications provided in the Society of Automotive Engineers (SAE) procedure J1243, "Diesel Emission Production Audit Test Procedure," May 1988, which is incorporated herein by reference, section 7.4 and shall be calibrated according to specifications in SAE procedure J1243, section 8.2.

2. The strip chart recorder shall comply with specifications in SAE procedure J1243, section 7.5, subsections 1- (May 1988).

(C) Procedure. The test procedure shall consist of preparation, preconditioning, and test phases:

1. In the preparation phase, the vehicle shall be placed at rest, the transmission shall be placed in neutral, and the vehicle wheels shall be properly restrained to prevent any rolling motion.

2. In the preconditioning phase, the vehicle shall be put through a snap-idle cycle two or more times until two successive measured smoke levels are within ten (10) opacity percent of each other. The smokemeter shall be

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rechecked prior to the preconditioning sequence to determine that its zero and span setting are adjusted according to specifications in SAE procedure J1243, section 8.1 (May 1988).

3. In the test procedure phase, the vehicle shall be put through the snap-idle cycle three times.

4. The opacity shall be measured during the preconditioning and test phases with a smokemeter and shall be recorded continuously on the chart recorder during each snap-idle cycle. The maximum instantaneous value recorded by the chart recorder shall be the opacity reading.

5. The test opacity to determine the compliance with (A)1. and (A)2. above shall be the average of the two meter readings with the least difference in opacity values. If all three readings have successive equivalent differences between them, the test opacity shall be the average of the three readings.

NOTE: Authority cited: Sections 39600, 39601, 43013, 43701(a), Health and Safety Code. Reference: Sections 39002, 39003, 39033, 43000, 43013, 43018, 43701(a) and 44011.6, Health and Safety Code.

REFERENCE